Bhavinkumar Rathava

773-733-3679 | bhavinkumarrathava2024@u.northwestern.edu | linkedin.com/in/bhavinvr | github.com/Bhavinrathava

EDUCATION

Northwestern University — GPA : 4.0
Master of Science in Artificial Intelligence — *09/2023 – 12/2024*

Indian Institute of Technology (IIT), Indore — CGPA : 8.03
B.Tech in Electrical Engineering — *07/2016 – 07/2020*

PROFESSIONAL EXPERIENCE

AI Engineer — 11/2025 – PRESENT
KAIZEN ANALYTIX — *Bellevue, WA*

- Automated Price Evaluation workflows by developing a multi-stage NLP Pipeline that can classify, map and analyze item prices to competitor prices to identify revenue uplift opportunities for over 50k food items in Universal Studios' catalog.
- Implemented many to many item mapping between food items by developing multi-stage hierarchy classifiers to restrict retrieval candidate pool from 50k to under 50 for efficient item mapping.

SDE — 04/2025 – 08/2025
AMAZON AGI — *Bellevue, WA*

- Reduced Data fetch latency for pretraining by 10x by leading development of a Peta Byte scale data transfer automation.
- Reduced on-call overhead by over 80% by offloading data transfer jobs via automated service.
- Streamlined User Experience with CLI tools to initiate, configure and Monitor Data Transfer requests without manual intervention by team Engineers.

Data Science Intern — 09/2024 – 12/2024
ALLEGION — *Evanston, IL*

- Delivered key product design insights on failure patterns and performed Root-Cause Analysis on textual and structured data to break-down root causes for warranty claims worth over $3 Million.
- Leveraged LLMs and Text Clustering Techniques to identify points of failure across 20k complains.

AI Engineering Intern — 07/2024 – 09/2024
ALO INDEX — *New Rochelle, NY*

- Automated document verification with multi-stage AI pipeline and Human-in-the-Loop to reduce manual verification tickets by 65%.
- Developed universal On-Premise AI Pipelines with clustering based image classification and RAG based text verification to allow aggressive re-usability.

Graduate Analyst (BA4) - Software Engineer — 08/2020 – 03/2022
BARCLAYS — *Pune, India*

- Supported Spending Preference feature within BarclayCard app with Robust, fault-tolerant REST APIs.
- Designed and Developed over 10 APIs for various business critical use cases including Fraud Detection, Credit Risk Analysis among others with Spring Boot.

PROJECTS

MTGSearch: NL Agent for Magic : The Gathering — 08/2025 – PRESENT

- Developing first of its kind AI Agent to handle Card search, Deck Building and Deck Analysis for MTG Community.
- Leveraging Scryfall databases to enable card search, comparison and recommendation abilities.

Technical Skills

Machine Learning : Unsupervised Anomaly Detection, Autoencoders, Seq2Seq (RNN/LSTM), Image Classification (CNN / RESNET / VGG)

Languages: Java, Python, JavaScript

Frameworks: PyTorch, Streamlit, Spring Boot, Mockito, Ollama, Node.js

Developer Tools: Git Actions, Docker, Kubernetes, CloudCDK

Libraries: Pandas, NumPy, LangChain, Huggingface, Transformers, MLFlow, NLTK, OpenAI

Cloud: AWS EC2, Lambda, S3, DynamoDB, AWS CloudFormation, Step Functions